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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ALAN COOKE, GARRY LYONS, and
ORAN CUMMINS

Appeal 2015-006767
Application 13/299,680
Technology Center 3600

Before EDWARD A. BROWN, LEE L. STEPINA, and
ARTHUR M. PESLAK, *Administrative Patent Judges*.

PESLAK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Alan Cooke et al. (“Appellants”) appeal under 35 U.S.C. § 134(a) from the Examiner’s decision rejecting claims 1, 3–8, and 10–20.¹² We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

¹ Claims 2 and 9 are cancelled. Appeal Br. 23, 25 (Claims App.).

² Appellants submit the real party in interest is MasterCard International Incorporated. *Id.* at 2.

THE CLAIMED SUBJECT MATTER

Appellants' invention is related "to the distribution of media to mobile devices, specifically advertisements distributed through the use of acoustic sounds." Spec. ¶ 2. Claims 1, 5, 8, 12, and 13 are independent. Claim 1, reproduced below, is illustrative of the claimed subject matter.

1. A method for distributing context based data, comprising:
 - receiving, in a mobile communication device, a high frequency analog acoustic signal, wherein the high frequency analog acoustic signal includes a stream of sound that is outside the audible spectrum of a human, and the high frequency analog acoustic signal contains encoded data;
 - converting, in the mobile communication device, the high frequency analog acoustic signal to a digital acoustic signal;
 - analyzing, in the mobile communication device, the digital acoustic signal to obtain the encoded data from the digital acoustic signal;
 - decoding, in the mobile communication device, the encoded data to obtain information; and
 - displaying the information on the mobile communication device.

REJECTIONS

- 1) Claims 1, 3–8, and 10–13 are rejected under 35 U.S.C. § 103(a) as unpatentable over Labaton (US 2007/0232355 A1, published Oct. 4, 2007), Shau (US 2006/0019605 A1, published Jan. 26, 2006),

and Song (US 2010/0250410 A1, published Sept. 30, 2010).³

Final Act. 2.

- 2) Claims 14–20 are rejected under 35 U.S.C. § 103(a) as unpatentable over Labaton, Shau, Song, and Das (US 2005/0197968 A1, published Sept. 8, 2005). Final Act. 4.
- 3) Claims 1, 3–8, 10, 11, and 14–18 are rejected under 35 U.S.C. § 101 as not directed to patent-eligible subject matter. Ans. 2.

DISCUSSION

Rejection 1

The Examiner finds that Labaton discloses most of the limitations of independent claims 1, 8, and 13, but does not explicitly teach the limitations “wherein the high frequency analog signal includes a stream of sound that is outside the audible spectrum of a human” and “in a mobile communication device.” Final Act. 2–3 (citing Labaton ¶¶ 11, 12, 23–25, Abstract). The Examiner finds that Shau teaches a high frequency analog acoustic signal outside the audible spectrum of a human. *Id.* at 2 (citing Shau ¶¶ 38–39). The Examiner reasons it would have been obvious to modify Labaton with Shau “to use an ultrasound transmitter/receiver to avoid interference with audio frequency signals in the human auditory range, and so that the signals could not be heard by humans.” *Id.* at 2–3. The Examiner additionally finds that Song discloses a mobile communication device. *Id.* at 3 (citing Song ¶¶ 5, 38, 40, 41, 119). The Examiner concludes it would have been obvious to use a mobile phone in Labaton’s system and method “as the acoustic receiver because mobile phones are small, compact, already contain audio

³ The heading of the rejection incorrectly also lists cancelled claims 2 and 9. Final Act. 2.

receiving elements (microphones), have display capabilities, microprocessors and connectability to the internet to retrieve payment information.” *Id.*

Appellants contend that in Labaton, the mobile phone does not receive an acoustic signal, but rather transmits an acoustic signal to a personal computer. Appeal Br. 9.⁴ Appellants next contend that Labaton’s PC, which receives an analog acoustic signal from Labaton’s mobile phone, does not convert a received acoustic signal to a digital acoustic signal, but rather converts it to an analog electrical signal. *Id.* at 10. Appellants argue that Labaton’s PC does not analyze a digital acoustic signal to obtain encoded data and does not decode encoded data to obtain information, but rather the PC sends the analog electrical signal to a remote computer system where the electrical signal is decoded to obtain information. *Id.* Appellants also argue that because the PC does not decode information from a digital acoustic signal, the decoded information is not available for display at the PC. *Id.* at 11.

The Examiner responds that Labaton teaches “encoding and decoding of wireless acoustic signals, for the purpose of pursuing and completing financial transactions, and utilizing at least one mobile communication device to complete the transaction.” Ans. 6. The Examiner acknowledges that Labaton does not disclose the recited location for decoding the received acoustic signal but states a “skilled artisan could conceivably use any number of possibilities as the processor to perform decoding of the received signal.” *Id.* The Examiner then notes that Song discloses using “mechanical

⁴ Appellants raise essentially the same contentions for claims 8 and 13 as for claim 1. See Appeal Br. 17–19.

sound waves as signal carriers for establishing wireless connections for a wide variety of devices . . . including but not limited to cellular phones and similar mobile communication devices.” *Id.* at 7.

Labaton discloses encoding an “identification/authentication string, computed in cellular phone **110** into acoustic waves using the cellular phone speakers **115**, in a way that acoustic waves will carry information encoded in the string to a microphone **120** external to the cellular phone, such as a PC microphone.” Labaton ¶ 22. When the acoustic waves reach the PC microphone, “the acoustic message is converted into an electrical signal, which can be digitized,” and “transmitted . . . to a remote computer system **140** which will in turn process the received signal into the original string and the transaction data can be identified and certified.” *Id.* ¶¶ 23, 24.

Although not specifically stated by the Examiner, we understand the Examiner’s proposed combination of Song and Labaton replaces Labaton’s PC, which is disclosed as receiving an analog acoustic signal, with a mobile communication device as taught by Song. *See* Song ¶ 119 (“the pass code . . . [is] sent to the payer . . . through a mobile phone.”). However, claim 1 requires that the *mobile communication device* not only receive a high frequency analog acoustic signal, but also convert the high frequency analog acoustic signal to a digital acoustic signal, analyze the digital acoustic signal to obtain encoded data, decode the encoded data to obtain information, *and* display the information. Labaton’s PC receives an analog acoustic signal and converts it to a digital signal. Labaton’s PC then sends the converted signal to remote computer system 140 where the signal is decoded and information obtained. We note that the Examiner does not direct us to any disclosure in Labaton that the information decoded by Labaton’s remote

computer system 140 is displayed after decoding. Nor has the Examiner adequately explained why it would have been obvious, based on Song, to display the decoded information. We, therefore, do not sustain the rejection of independent claims 1, 8, and 13 under 35 U.S.C. § 103(a) because the Examiner has not stated an adequate reason supported by a rational underpinning for the rejection. Claims 3 and 4 depend from claim 1 and claims 10 and 11 depend from claim 8. Appeal Br. 23–25 (Claims App.). We do not sustain the rejection of claims 3, 4, 10, and 11 for the same reasons stated for claims 1 and 8.

The Examiner rejects independent claims 5 and 12 based on Labaton, Shau, and Song with essentially the same findings and reasoning as for claims 1, 8, and 13. Final Act. 3–4. Appellants raise the same contentions as for claims 1, 8, and 13. Appeal Br. 15, 18. Therefore, we do not sustain the rejection of claims 5 and 12 for the same reasons stated above for claim 1. Claims 6 and 7 depend from claim 5. *Id.* at 24. We do not sustain the rejection of claims 6 and 7 for the same reasons stated for claim 5.

Rejection 2

Claims 14–16 depend from claim 1, claims 17 and 18 depend from claim 8, and claims 19 and 20 depend from claim 13. Appeal Br. 27–28 (Claims App.). The Examiner does not rely on the additional disclosure of Das to cure the deficiencies in the combination of Labaton, Shau, and Song as stated above in connection with claims 1, 8, and 13. Final Act. 4–5. We, therefore, do not sustain the rejection of claims 14–20 under 35 U.S.C. § 103(a) over Labaton, Shau, Song, and Das for the same reasons stated above for claims 1, 8, and 13.

Rejection 3

Appellants argue claims 1, 3–8, 10, 11, and 14–18 as a group. *See* Reply Br. 9–21. We select claim 1 as representative and claims 3–8, 10, 11, and 14–18 stand or fall with claim 1. 37 C.F.R. § 41.37 (c)(iv).

The Examiner determines that “[b]ased upon an analysis with respect to the claim as a whole, claim(s) 1, 3–8, 10–11 and 14–18 do not recite something significantly different than a judicial exception.” Ans. 2. The Examiner describes Appellants’ invention “as a protocol for receiving an ultrasonic signal in a mobile communication device that is encoded with data, and then decoded and displayed on the mobile communication device.” *Id.* The Examiner finds that Labaton discloses “that using mobile devices for e-commerce transactions is well-known” and that “Song teaches that any processor can be used to decode the received signal.” *Id.* at 3 (citing Labaton ¶ 11, Song ¶ 40). The Examiner then states that the claims use “a generic mobile communication device, a generic ultrasound transducer capable of receiving, well-known encoding and decoding practices, and generic processors capable of controlling the reception, decoding and display.” *Id.* The Examiner states “[t]he inventive concept of the invention claimed . . . is that the location of the processing is done in a mobile communication device.” *Id.* at 3. The Examiner then concludes that Appellants’ “invention does not improve other technology or fields . . . [and] therefore is an abstract idea.” *Id.* at 4.

Appellants contend that the Examiner has not clearly identified and explained an abstract idea. Reply Br. 10. Appellants then argue that the Examiner has not established that the claims are directed to an abstract idea because the claims state “a very particular way of configuring hardware to

support or facilitate a narrow form of distribution of context based data to mobile devices prompted by acoustic based stimuli.” *Id.* at 11. Appellants next argue that “[t]he claims are necessarily computer-based and require particular programming for which human activity simply cannot be substituted.” *Id.* at 12, 14–17. Appellants further argue that the claims provide a technological improvement. *Id.* at 19. For the following reasons, these contentions are not persuasive and we sustain the rejection of claim 1.

The title of the Appellants’ application is “Method and System for Distribution of Advertisements to Mobile Devices Prompted by Aural Sound Stimulus.” Spec. Title Page. The Specification provides that Appellants’ invention “relates to distribution of media to mobile devices, specifically advertisements distributed through the use of acoustic sounds.” *Id.* ¶ 2. Appellants’ summary of the claimed subject matter for claim 1 directs us, *inter alia*, to Appellants’ Figure 18. Appeal Br. 4–5. Figure 18 provides a flow chart with generic steps for receiving and processing an acoustic signal to obtain information about a product from the signal, and displaying the product information to a consumer on the mobile communication device. Spec. Fig. 18. Thus, claim 1 is directed to a method for analyzing and decoding an acoustic signal and then displaying information obtained from the signal on a mobile communication device.

The Supreme Court has established a two part test for determining whether a claim recites patent-eligible subject matter. *Alice Corp. Pty, Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2350 (2014). First, the claims are examined to determine whether they are directed to a patent ineligible concept such as an abstract idea. *Id.* If so, the claim elements are

considered both individually and as an ordered combination to determine whether they transform the claim into a patent-eligible application. *Id.*

We look to legal precedent for guidance in determining whether claim 1 is directed to an abstract idea. The Federal Circuit has determined that claims directed to subject matter similar to the method of claim 1 are directed to abstract ideas. *See Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1268 (Fed. Cir. 2016)(“delivering selectable media content and subsequently playing selected content on a portable device”); *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1256 (Fed. Cir. 2016)(claim “directed to a broadcast system in which a cellular telephone . . . (1) requests and receives network-based content from the broadcaster . . . (2) is configured to wirelessly download an application . . . and (3) contains a display that allows the user to select particular content”). The Federal Circuit also directs us “at step one [of the *Alice* analysis] . . . ‘to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea.’” *In re TLI Communications LLC Patent Litigation*, 823 F.3d 607, 612 (Fed. Cir. 2016).

Accordingly, in this case, we determine whether claim 1 is directed to an improvement in the functionality of the mobile communication device. Appellants do not provide persuasive argument to show that claim 1 recites a specific hardware configuration or an improvement to the functionality of a generic mobile communication device. Appellants argue “the recitations of the present claims would require specific programming, [and] the resulting computer would be a *specific purpose computer*.” Reply Br. 19. Appellants do not direct us to any limitation of claim 1 reciting any specific programming or hardware configuration. Claim 1 merely recites generic

method steps such as “decoding . . . the encoded data to obtain information.” Claim 1, thus does not recite any specific technical functionality of the mobile communication device or an improvement to its functionality to process acoustic signals to obtain information from the signals and to thereafter display the information to a consumer. That claim 1 uses a mobile communication device to perform an abstract idea of decoding an acoustic signal “does not make the claim[s] any less abstract for step 1 analysis.” *In re TLI Communications*, 823 F.3d at 613. We, thus, determine that claim 1 is directed to an abstract idea.

We now analyze the elements of claim 1 to determine whether the elements individually, or as an ordered combination, transform the recited method into patent-eligible subject matter. Mobile communication devices are not novel but are ubiquitous information receiving devices with capability to display information. *See Ultamercial, Inc. v Hulu, LLC*, 772 F.3d 709, 716–17 (Fed. Cir. 2014). Likewise, sending, analyzing, and decoding acoustic signals on mobile communication devices is not novel. *See Labaton, Abstract, Shau, Abstract*. The “mere recitation of concrete, tangible components is insufficient to confer patent eligibility to an otherwise abstract idea. Rather, the components must involve more than performance of ‘well-understood, routine conventional activit[ies] previously known to the industry.’” *In re TLI Communications*, 823 F.3d at 613 (citations omitted). Displaying the decoded information on the mobile communication device does not add significantly more to the abstract idea of decoding an acoustic signal. *Affinity Labs*, 838 F.3d at 1263.

Appellants contend that the claims provide a technological improvement. Reply Br. 19–20. We are not persuaded by this contention

because, in support, Appellants merely essentially list the elements of claim 1 without any persuasive explanation of how the elements either individually, or as an ordered combination, amount to an inventive concept that converts an abstract idea into patent-eligible subject matter. We, therefore, determine that the elements of claim 1, considered both individually and as an ordered combination, do not transform claim 1 into patent-eligible subject matter. We sustain the rejection of claim 1 under 35 U.S.C. § 101. Claims 3–8, 10, 11, and 14–18 fall with claim 1.

DECISION

The Examiner’s decision rejecting claims 1, 3–8, and 10–20 under 35 U.S.C. § 103(a) is reversed.

The Examiner’s decision rejecting claims 1, 3–8, 10, 11, and 14–18 under 35 U.S.C. § 101 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART